

CLAIMS:

1. An emergency vehicle detector (EVD) system operating as a safety device in association with a motor vehicle and enabling motor vehicle operators to be warned of hazards and existing near the motor vehicle or within its path of travel, comprising:

an emergency signal detector adapted to detect emergency signal emitted by emergency transmitters;

a direction module for determining the general location of the emergency signal's emission with respect to the motor vehicle; and

alarm generator for generating at least one of an audible and visual alarm for motor vehicle operators.

2. The system of claim 1 wherein an emergency signal detector is adapted to detect an optical signature emitted from an emergency transmitter.

3. The system of claim 1 wherein an emergency signal detector is adapted to detect a radio frequency emitted from an emergency transmitter.

4. The system of claim 1 wherein an emergency signal detector is adapted to detect radar emitted from an emergency transmitter.

5. The system of claim 1 wherein an emergency signal detector is adapted to detect infrared signatures emitted from an emergency transmitter.

6. The system of claim 1 wherein said direction module determines the location of the emergency signal's emission with respect to the motor vehicle using GPS location information transmitted by the emergency transmitter.
7. The system of claim 1 wherein said direction module determines the location of the emergency signal's emission with respect to the motor vehicle using signal emission triangulation based on receipt of signals being transmitted by the emergency transmitters.
8. The system of claim 3 wherein said direction module determines the location of the emergency signal's emission with respect to the motor vehicle using GPS location information transmitted by the emergency transmitter.
9. The system of claim 2 wherein said direction module determines the location of the emergency signal's emission with respect to the motor vehicle using signal emission triangulation based on receipt of signals being transmitted by the emergency transmitters.
10. The system of claim 4 wherein said direction module determines the location of the emergency signal's emission with respect to the motor vehicle using signal emission triangulation based on receipt of signals being transmitted by the emergency transmitters.
11. The system of claim 5 wherein said direction module determines the location of the emergency signal's emission with respect to the motor vehicle using signal emission triangulation based on receipt of signals being transmitted by the emergency transmitters.

12. An emergency vehicle detector (EVD) system operating as a safety device in association with a motor vehicle and enabling motor vehicle operators to be warned of hazards and existing near the motor vehicle or within its path of travel, comprising:

an emergency signal detector adapted to detect emergency signal emitted by emergency transmitters;

a direction module for determining the general location of the emergency signal's emission with respect to the motor vehicle;

an alarm generator for generating a visual alarm;

a display for indicating the direction of an emergency with respect to the motor vehicle.

13. The system of claim 12 wherein said display is adapted for indicating emergency location by: illumination of "L" indicating that the emergency is located to the left of the motor vehicle; illumination of "B" indicating that the emergency is located behind the motor vehicle; illumination of "F" indicating that the emergency is located to the front of the motor vehicle; and illumination of "R" indicating that the emergency is located to the right of the motor vehicle.

14. The system of claim 13 wherein said display is adapted for indicating emergency location by illuminating "LF", "RF", "LB" and "RB" indicating the emergency is located between locations "L", "R", "F", and "B".

15. A method of detecting the announcement of an emergency, comprising the steps of:

providing a vehicle-based emergency detection unit for detecting the existence of a hazard or emergency near a motor vehicle housing the emergency detection unit;

receiving an emergency signal transmitted by a emergency signal transmitter using the emergency detection unit;

determining the location of an emergency using said emergency detection unit, wherein the location is based on the signal transmitted by the emergency signal transmitter and received by the emergency detection unit;

providing an alarm, said alarm including at least one of an audio and visual indication, to occupants within the motor vehicle, said alarm indicating that a nearby emergency exists and also indicating the general location of the emergency based on said step of determining the location of an emergency carried out by the emergency detection unit.

16. The method of claim 15 wherein the step of determining the location of an emergency includes processing of GPS information by the emergency detection unit.

17. The method of claim 15 wherein the step of determining the location of an emergency includes triangulation analysis of signal emission information by the emergency detection unit.

18. The method of claim 15 wherein the emergency signal transmitter includes at least one of: ambulances, police cars, fire engines, school buses and stationary targets including crosswalks and school zones.

19. The method of claim 16 wherein the emergency signal transmitter includes at least one of: ambulances, police cars, fire engines, school buses and stationary targets including crosswalks and school zones.

20. The method of claim 17 wherein the emergency signal transmitter includes at least one of: ambulances, police cars, fire engines, school buses and stationary targets including crosswalks and school zones.